Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SEIICHI MASUKO,
ICHISABURO NAKAMURA,
YOSHIMATSU NAKA,
KEIICHI FUKUDA,
AKIRA YAMAMOTO,
YASUYUKI HATAKEYAMA,
AKIHIRO YAMAGUCHI,
and
KEIZABURO YAMAGUCHI

Appeal No. 1997-0680
Application No. 08/053,974

HEARD
SEPTEMBER 14, 2000

Before JOHN D. SMITH, PAK, and LIEBERMAN, **Administrative Patent Judges**.

LIEBERMAN, **Administrative Patent Judge**.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 22 through 27, 35 through 41, and refusing to allow claim 4 and 43 as amended subsequent to the final rejection, which are all the claims in the application.

BACKGROUND

Two embodiments are presented in the instant invention. One embodiment is directed to a method for preventing scale from adhering to the inner walls of a polymerization tank by coating the tank with an aqueous alkali solution of a modified phenolic resin. The resin has its pH adjusted with an acid such that the pH is 0.2 to 4.0 pH units higher than the pH at which the modified phenolic resin deposits at ambient temperature. The application of the modified phenolic resin occurs under conditions wherein the temperature of the surface has been preheated to 40°C or higher.

A second embodiment is directed to a method of producing a coating fluid by; (1)condensing at least one phenol and at least one aldehyde in the presence of a basic catalyst with a modifier to produce a modified resin; (2) diluting the alkaline liquid with water; (3) adding the diluted liquid to an acid to deposit the modified phenolic resin; (4) separating the modified phenolic resin; (5) dissolving the resin in an organic solvent or an aqueous alkali solution.

THE CLAIMS

Claims 22 and 43 are illustrative of appellants' invention and are reproduced below.

22. A method of producing a coating fluid to be applied to the surfaces of parts of a polymerizing apparatus that will come into contact with vinyl monomer which is to be polymerized in an aqueous medium or subjected to mass-polymerization so that the produced vinyl chloride polymer is prevented from adhering to said surfaces, which method comprises modifying an initial condensate obtained by condensing at least one phenol and at least one aldehyde in the presence of a basic catalyst with a modifier to produce a modified phenolic resin, diluting the obtained alkaline liquid with water so that the concentration of said reaction product has a prescribed value, adding the diluted liquid to an acid to adjust the pH thereby depositing said modified phenolic resin, and separating the deposited modified phenolic resin and dissolving said modified phenolic resin in an organic solvent or an aqueous alkali solution having a pH for dissolving said modified phenolic resin.

43. A method of preventing scale from adhering to the inner wall surfaces of a polymerization tank and the like used in the polymerization of vinyl chloride monomers, comprising:

preparing an aqueous coating fluid which is an aqueous alkali solution containing a modified phenolic resin in an amount of 0.1 to 10.0 wt. % and having a pH adjusted with an acid to a pH of 0.2 to 4.0 higher than the pH at which the modified phenolic resin deposits at ambient temperature; and

applying the coating fluid to the surfaces wherein the temperature of the surfaces has been previously elevated to 40EC or over and wherein the modified phenolic resin is deposited from the aqueous coating fluid and adhered to the surfaces.

THE REFERENCES OF RECORD

As evidence of anticipation and obviousness, the examiner relies upon the following references.[1]

Cohen	4,200,712	Apr. 29, 1980			
Yonezawa et al. (Yonezawa)	4,320,215	Mar. 16, 1982			
Okada et al. (Okada)	4,355,141	Oct. 19, 1982	Walker et al. (Walker)	4,431,783	Feb. 14, 1984
Toyooka et al. (Toyooka)	4,555,555	Nov. 26, 1985			
Dorsch et al. (Dorsch)	4,579,758	Apr. 1, 1986			
Masuko, et al. (Masuko) (Published Japanese Patent Application)	55-160004	Dec. 12, 1980			
Asahi et al. (Asahi) (Published Japanese Kokai Patent Application)	61-181802	Aug. 14, 1986			

THE REJECTIONS

Claims 43 and 4 stand rejected under 35 U.S.C. § 102(a) or (b) as anticipated by, or in the alternative, under 35 U.S.C. § 103 as obvious over Cohen, Toyooka, Dorsch, Walker, JP 61-181802 (JP '802), or JP 55-160004 (JP '004).

Claims 22 through 27 and 35 through 41 are rejected under 35 U.S.C. 102(a) or (b) as anticipated by, or in the alternative, under 35 U.S.C. § 103 as obvious over Cohen, JP 55-160004 (JP '004), Walker, Toyooka, Dorsch, Okada, and/or Yonezawa.

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1 Our consideration of JP '802 and JP '004 is based upon the attached English translations.

OPINION

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with the appellants that the aforementioned rejections under 35 U.S.C. §102(a) or (b), and 35 U.S.C. § 103 are not well founded. Accordingly, we do not sustain these rejections.

The Rejection under 35 U.S.C. §§ 102 and 103-Claims 43 and 4

"[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a ***prima facie*** case of unpatentability," whether on the grounds of anticipation or obviousness. ***In re Oetiker***, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). On the record before us, the examiner relies upon six references to reject the claimed subject matter and establish a ***prima facie*** case of anticipation, or in the alternative, obviousness.

However, a careful review of each of the references with respect to the first embodiment reveals that there is no explicit disclosure of "applying the coating fluid to the surfaces wherein the temperature of the surfaces has been previously elevated to 40°C or over." See claim 43. The examiner however submits two separate arguments. It is the examiner's position that, "due to heated environs normally present with reactor, the surface(s) of the reactor (surface) would have been 'previously elevated to 40°C.'" See Answer, page 7.

During patent prosecution, claims are to be given their broadest reasonable interpretation consistent with the specification, and the claim language is to be read in view of the specification as it would be interpreted by one of ordinary skill in the art. ***In re Morris***, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). ***In re Zletz***, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); ***In re***

Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983); ***In re Okuzawa***,
537 F.2d 545, 548, 190 USPQ 464, 466 (CCPA 1976).

Our construction of the subject matter defined by appellants' claim 43 is that the claimed subject matter is directed to a surface which has been preheated to 40°C at the time of coating application. This interpretation is consistent with appellants' explicit statement at oral hearing, the Reply Brief and is in accordance with the disclosure of the specification, page 8, Examples 1, 3 and 5 and Comparative Example 2.

The examiner further argues that where a recoating step is being effectuated, the temperature of the reactor would be essentially identical to that of the claimed subject matter. Answer, page 4. Stated otherwise, the examiner argues that the surface to be recoated retains a temperature of 40°C or greater as a result of previous polymerization reactions. However, no such teaching, disclosure or suggestion is found in any of the references of record.

Inherency requires that the characteristic must necessarily be present. It may not be established by probabilities or possibilities. Hence, the mere possibility that the inner wall surfaces of a polymerization tank may be at a temperature of 40°C or greater at the time the coating fluid is applied is not sufficient to establish inherency. ***In re Oelrich***, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981); ***Ex parte Skinner***, 2 USPQ2d 1788, 1789 (Bd. Pat. App. & Int. 1986). Furthermore, the examiner must provide some evidence or scientific reasoning that the presence of a temperature of 40°C or greater is an inherent characteristic of the prior art process. In the case before us, no such evidence or reasoning has been set forth.

Accordingly, the rejection of the examiner is reversed.

The Rejection under 35 U.S.C. §§ 102 and 103-Claims 22-27 and 35-41

As with the previous embodiment, the examiner relies upon seven references alone or in combination to reject the claimed subject matter and establish a ***prima facie*** case of anticipation or in the alternative obviousness. It is the examiner's position that the "[r]eferences disclose condensates derived from phenols and aldehyde(s) and method of making condensates." See Answer, page 5. However, the process of the claimed subject matter is directed to the formation of a modified phenolic resin, adding the modified phenolic resin to an acid causing the resin to be deposited and thereafter dissolving the acid in an organic solvent or an aqueous alkali solution. Where modified phenolic resins are prepared in the art of record, they customarily remain in alkali, not acid.

The only exception occurs in Dorsch, column 7, lines 3-26 wherein a base catalyzed phenolic condensate is recovered by dissolution in dilute alkali, precipitated with HCl, filtered, dried and thereafter dissolved in an aqueous alkali solution in accordance with the claimed subject matter. However, notwithstanding the disclosure therein, the phenolic condensate is neither "modified" nor diluted with water as required by the claimed subject

matter. Furthermore, on the record before us, the examiner has provided no rationale why the resin prepared by Dorsch should be treated with a modifier or diluted with water in place of alkali. Accordingly, the rejection of the examiner is reversed.

Because we reverse on this basis, we need not reach the issue of the sufficiency of the showing of unexpected results. ***In re Geiger***, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987).

DECISION

The rejection of claims 43 and 4 under 35 U.S.C. § 102(a) or (b) as anticipated by, or in the alternative, under 35 U.S.C. § 103 as obvious over Cohen, Toyooka, Dorsch, Walker, JP 61-181802 (JP '802), or JP 55-160004 (JP '004) is reversed.

The rejection of claims 22 through 27 and 35 through 41 under 35 U.S.C. 102(a) or (b) as anticipated by, or in the alternative, under 35 U.S.C. § 103 as obvious over Cohen, JP 55-160004 (JP '004), Walker, Toyooka, Dorsch, Okada, and/or Yonezawa is reversed.

The decision of the examiner is reversed.

REVERSED

JOHN D. SMITH Administrative Patent Judge	)	
CHUNG K. PAK Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
PAUL LIEBERMAN Administrative Patent Judge	)	

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